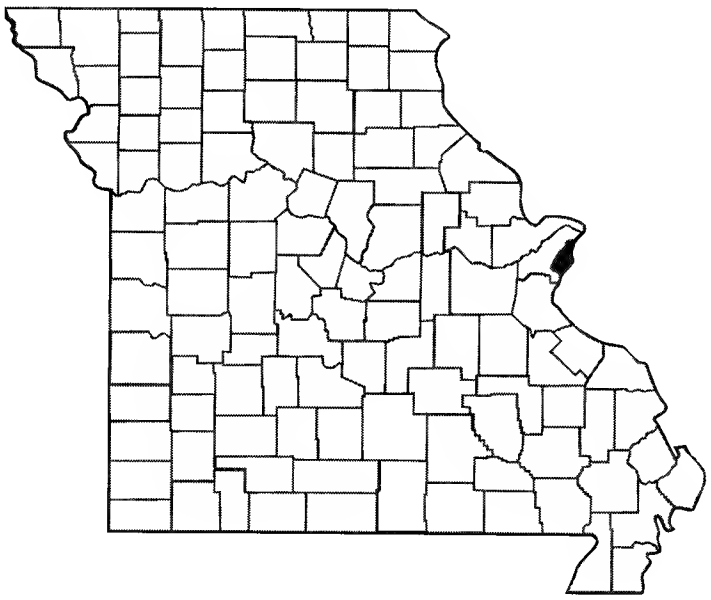
PRE-CERCLIS SITE SCREENING REPORT

Federated Metals Division Site
St. Louis, Missouri

August 31, 2006



Missouri Department of Natural Resources
Division of Environmental Quality
Hazardous Waste Program

MISSOURI SUPERFUND PRE-CERCLIS SITE SCREENING FORM

I. SITE NAME AND LOCATION

Name: Federated Metals Division		**Alias:** Possibly F.E.D. Corporation	
Address or other Location Identifier: 4041 Park Avenue			
City: St. Louis	**County:** St. Louis	**State:** MO	**Zip:** 63110

Directions to Site: From the intersection of Interstate 170 and Interstate 64, travel east on Interstate 64 approximately 5.5 miles to exit 36d, Chouteau Avenue. Stay left on Chouteau Avenue and continue approximately 0.5 mile to South 39th Street. Turn right onto South 39th Street and travel approximately 0.5 mile to Park Avenue. Turn right onto Park Avenue and travel approximately 0.1 mile.

Map Attached: X

II. SITE REFERRAL INFORMATION

Referred By: Citizen petition to the Environmental Protection Agency (EPA), Region 7	**Date of Referral:** 11/13/03
Reason for Referral (if applicable): Concern regarding lead contamination in surface soils near former smelters.	
Mailing Address:	

City:	**State:**	**Zip:**
Telephone:	**Fax:**	

III. SITE INFORMATION

Type of Facility: Former lead or zinc smelter or processing facility	**Type of Ownership:**
Owner Name: Unknown	
Mailing Address:	

City:	**State:**	**Zip:**
Telephone:	**Fax:**	
Operator Name (if different from owner):		
Mailing Address:		

City:	**State:**	**Zip:**
Telephone:	**Fax:**	
Current Site Status:	**Years of Operation:**	

Operational History:

In November of 2003, a citizen petitioned the EPA to determine the potential for soil contamination resulting from operation of former lead smelters within the City of St. Louis (Reference 5). It is common to find lead contamination in soils, groundwater, and surface water surrounding lead mines, mills and smelter sites. The contamination around smelters comes from dust fallout from the furnace smokestacks, the production process, and the slag piles. These operations have the potential to produce waste containing high levels of lead and other metals which may have been deposited in surface soils both on and surrounding the sites.

An inactive Delaware corporation known as F.E.D. Corporation was formerly known as Federated Metals. If Federated Metals Division is the same corporation as F.E.D. Corporation, then the smelter operated from 1932 to 1937. The site was referred to the Missouri Department of Natural Resources on November 13, 2003 by EPA

Region 7. The Federated Metals Division was cited in Appendix B: Babbitt Metal and Solders Smelters from William Eckel's study published in the American Public Health Journal (Reference 5). This site was one of fifteen sites investigated as part of the Former St. Louis Lead and Zinc Smelting and Processes Sites study.

IV. CERCLA APPLICABILITY [40 CFR 300.410(E)]

1. Is there a release as defined by the NCP? Yes X No ___

Explain:

Sampling documented a release of lead in the surface soils within one mile of the former facility. Surface soils in three areas contained levels of lead that were significantly above (more than three times) background concentrations established for the site.

(A RELEASE Is Defined As Any Spilling, Leaking, Pumping, Pouring, Emitting, Emptying, Discharging, Injecting, Escaping, Leaching, Dumping, Or Disposing Into The Environment (Including The Abandonment Of Barrels, Containers, And Other Closed Receptacles Containing Any Hazardous Substances Or Pollutant Or Contaminant), But Excludes: Workplace Exposures; Engine Exhaust Emissions; Nuclear Releases Otherwise Regulated; And The Normal Application Of Fertilizer. For Purposes Of The NCP, Release Also Means Threat Of Release.)

2. Is the source a facility or vessel as defined by the NCP? Yes X No ___

Explain: The contaminated soil (source) is likely attributable to former lead-based paint use in the area.

(A FACILITY Is Defined As Any Building, Structure, Installation, Equipment, Pipe Or Pipeline (Including Any Pipe Into A Sewer Or POTW), Well, Pit, Pond, Lagoon, Impoundment, Ditch, Landfill, Storage Container, Motor Vehicle, Rolling Stock, Or Aircraft Or Any Site Or Area, Where A Hazardous Substance Has Been Deposited, Stored, Disposed Of, Or Placed, Or Otherwise Come To Be Located; But Does Not Include Any Consumer Product In Consumer Use Or Any Vessel. A VESSEL Is Defined As Any Description Of Watercraft Or Other Artificial Contrivance Used, Or Capable Of Being Used, As A Means Of Transportation On Water Other Than A Public Vessel.)

3. Does the release involve either a hazardous substance, pollutant or contaminant as defined by the NCP? Yes X No ___

Explain:

The hazardous substance released is lead.

(A HAZARDOUS SUBSTANCE Means Any Substance, Element, Compound, Mixture, Solution, Hazardous Waste, Toxic Pollutant, Hazardous Air Pollutant, Or Imminently Hazardous Chemical Substance Or Mixture Designated Pursuant To The CWA, CERCLA, SDWA, CAA Or TSCA. The Term Does Not Include Petroleum Products, Natural Gas, Natural Gas Liquids, Liquefied Natural Gas, Synthetic Gas Or Mixtures Of Natural And Synthetic Gas. The Definition Of POLLUTANT Or CONTAMINANT Includes, But Is Not Limited To, Any Element, Substance, Compound, Or Mixture, Including Disease-Causing Agents, Which After Release Into The Environment And Upon Exposure, Ingestion, Inhalation, Or Assimilation Into Any Organism, Either Directly From The Environment Or Indirectly By Ingestion Through Food Chains, Will Or May Reasonably Be Anticipated To Cause Death, Disease, Behavioral Abnormalities, Cancer, Genetic Mutation, Physiological Malfunctions Or Physical Deformations, In Such Organisms Or Their Offspring. The Term Does Not Include Petroleum Products, Natural Gas, Natural Gas Liquids, Liquefied Natural Gas, Synthetic Gas Or Mixtures Of Natural And Synthetic Gas.)

4. Is the release subject to the limitations on response? Yes ___ No X

Explain:

(The LIMITATIONS ON RESPONSE Provisions Of The NCP (40 CFR 300.400(B) States That Removals Shall Not Be Undertaken In Response To A Release: Of A Naturally Occurring Substance In Its Unaltered Or Natural Form; From Products That Are A Part Of The Structure Of, And Result In Exposure Within, Residential Buildings Or Business Or Community Structures; Or Into Public Or Private Drinking Water Supplies Due To Deterioration Of The System Through Ordinary Use.)

5. Is there a potential for other federal or state response mechanisms? Yes ___ No _X_

If so, identify the appropriate program:

___ RCRA ___ NRC ___ FIFRA ___ UST

___ State VCP ___ Other State Deferral ___ Other Federal (_____)

Explain:

V. PATHWAY EVALUATION

1. Source and Waste Characteristics

Source Types and Locations: The contaminated soil (source) is likely attributable to lead-based paint used in residential buildings.

Size of Sources: The source sizes are limited to areas near vacant houses which have lead based paint deterioration.

Waste Types and Quantities: The quantity of contaminated soil is unknown at this time.

Hazardous Substances Present: Lead

2. Groundwater Use and Characteristics Within 4 Miles

General Hydrology:
Unknown

Are Karst Features Present on or Near Site: Unknown

Depth to Shallowest Groundwater: Unknown

Groundwater Wells Within 4 Miles: Unknown

Private Wells:

Municipal Wells:

Industrial/Agricultural Wells:

Locations and Populations Served (if known):

Distance to Nearest Drinking Water Well: Unkown

3. Surface Water Use and Characteristics

Is Site in a Flood Plain: Unknown **If Yes,** ___ 10 year ___ 100 year ___ 500 year

Distance to Nearest Surface Water: Unknown
(If within 2 miles, fill out surface water pathway)

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List Surface Water Bodies Within 15 Downstream Miles:

Drinking Water Intakes Within 15 Downstream Miles: Unknown

Locations and Populations Served (if known):

Fisheries, Sensitive Environments or Wetlands Within 15 Downstream Miles: Unknown

Significant Features (if known or applicable):

4. Soil and Air Exposure Characteristics

Number of People Living Within 200 Feet of Site: Unknown, heavy urban area.

Number of Schools or Daycares Within 200 Feet of Site: Unknown

General Population Within 4 Miles (rural, small city, heavy urban area, etc...): Heavy urban

Number of Workers On-Site:

Any terrestrial sensitive environments and/or wetlands present on-site?	**Yes** ___	**No** ___
Is site access restricted?	**Yes** ___	**No** X

VI. SUPERFUND SITE SCREENING CRITERIA [40 CFR 300.410(e)]

1. Does the quantity or concentration of hazardous substances warrant response?	**Yes** ___	**No** X

Explain:

A total of twenty soil samples were collected from nine sampling locations within one mile of the former facility. Lead concentrations for sampling locations within one mile of the site ranged from 82 ppm to 1307 ppm. Of the nine locations sampled, two locations contained lead in the soils above the EPA PRG of 400 ppm lead. One vacant residential location contained lead in the surface soil (0-2") at 704 ppm in addition to lead in the sub-surface soil (3-6") at 568 ppm. The second vacant residential location contained lead in the surface soils within the drip line (within 3 feet of the structure) at 1307 ppm.

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2. Has a PRP been identified? Yes ___ No _X_

Explain:

3. Is there an actual or potential exposure to hazardous substances, pollutants or contaminants? Yes _X_ No ___

Explain:
Exposure to contaminated soil is possible through contact with the soil. However, the contaminated soil is limited to two small areas near vacant residential buildings. All of these areas have well-established vegetation.

4. Is there an actual or a potential threat for contamination of drinking water supplies? Yes ___ No _X_

Explain:
At this time, a threat to drinking water supplies is not expected. Groundwater contamination is unlikely because the contamination has been deposited into the surface and shallow sub-surface soils and is not believed to be at extended depth.

5. Are there hazardous substances, pollutants or contaminants in drums, barrels or bulk storage containers? Yes ___ No _X_

Explain:
No drums, barrels, or bulk storage containers were noted in the residential areas sampled.

6. Are there high levels of hazardous substances, pollutants or contaminants in surface soils? Yes ___ No _X_

Explain:
Soil on-site contained levels of lead greater than the EPA PRG screening level of 400ppm lead and the time-critical removal action level of 1200ppm lead for residential settings. Additionally, this contaminated soil is localized to two small areas near vacant residential houses.

("High levels" may be determined by streamlined risk assessments, health consultations, state or federal soil screening criteria, and/or Superfund program policies or directives.)

7. Are there conditions on site which may be susceptible to impact from adverse weather conditions? Yes ___ No _X_

Explain: The vegetation is well established in both locations with contaminated soils. The migration of lead within the surface soils during adverse weather conditions is unlikely.

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8. Is there a threat of fire or explosion? **Yes ___** **No X**

Explain: Lead contaminated soil is not flammable or explosive.

9. Are there other situations or factors which warrant further Superfund response? **Yes ___** **No X**

Explain:

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VII. SUPERFUND SITE SCREENING FINDINGS AND RECOMMENDATIONS

SITE SCREENING FINDINGS

Answer the following questions as support for the site recommendation.

Yes	No	Condition or Factor	Yes	No	Condition or Factor
X		**Is there a release or threat of release?**	X		**Is there a direct soil exposure pathway threat?**
X		**Is the source a facility or vessel?**		X	**Are there high levels of contaminants in surface soils?**
X		**Does the release involve a hazardous substance, pollutant, or contaminant?**		X	**Is there an air pathway threat?**
	X	**Is the site subject to response limitations?**		X	**Is there a threat of fire or explosion?**
	X	**Does the quantity or concentration of hazardous substances warrant response?**		X	**Are there drums, barrels, or bulk storage containers present?**
X		**Are there actual or potential exposure threats?**		X	**Is the site susceptible to adverse weather conditions?**
	X	**Is there an actual or a potential threat for contamination of drinking water supplies?**		X	**Is there a willing/capable PRP response?**
	X	**Is there a surface water pathway threat?**		X	**Can the site be referred to another program?**

SITE SCREENING RECOMMENDATIONS

X	**Superfund CERCLIS Entry Not Warranted** **No Further Superfund Response Action Required**
	Superfund CERCLIS Entry Warranted **Not Recommended For CERCLIS Entry At This Time – Other Response Action Planned**
	Superfund CERCLIS Entry Warranted **Recommended For CERCLIS Entry – Additional Integrated Assessment Recommended**
	Superfund CERCLIS Entry Warranted **Recommended For CERCLIS Entry – Removal Action Recommended** *(Complete A Removal Evaluation Form)* **___ Emergency ___ Time-Critical ___ Non-Time-Critical**

Comments:

The Federated Metals Division Site is not recommended for entry into CERCLIS at this time. Sampling documented that lead was present above the EPA PRG residential screening levels in surface soils and sub-surface soils within one mile of the site. Additionally, sampling documented that lead was present above the EPA PRG time-critical level in surface soils within the drip-line of a vacant residential home. Although the concentrations of lead exceed these EPA PRG screening levels, there is no evidence of wide spread contamination due to smelting activities in the area. The lead contamination is localized to small areas near two vacant houses with deteriorating paint. The contaminated soil (source) is likely attributable to lead-based paint use.

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VIII. ADDITIONAL INFORMATION OR COMMENTS

PREPARED BY:
NAME: Greg Bach **SIGNATURE:** _____ **DATE:** _____

REVIEWED BY:
NAME: _____ **SIGNATURE:** _____ **DATE:** _____

APPROVED BY:
NAME: _____ **SIGNATURE:** _____ **DATE:** _____

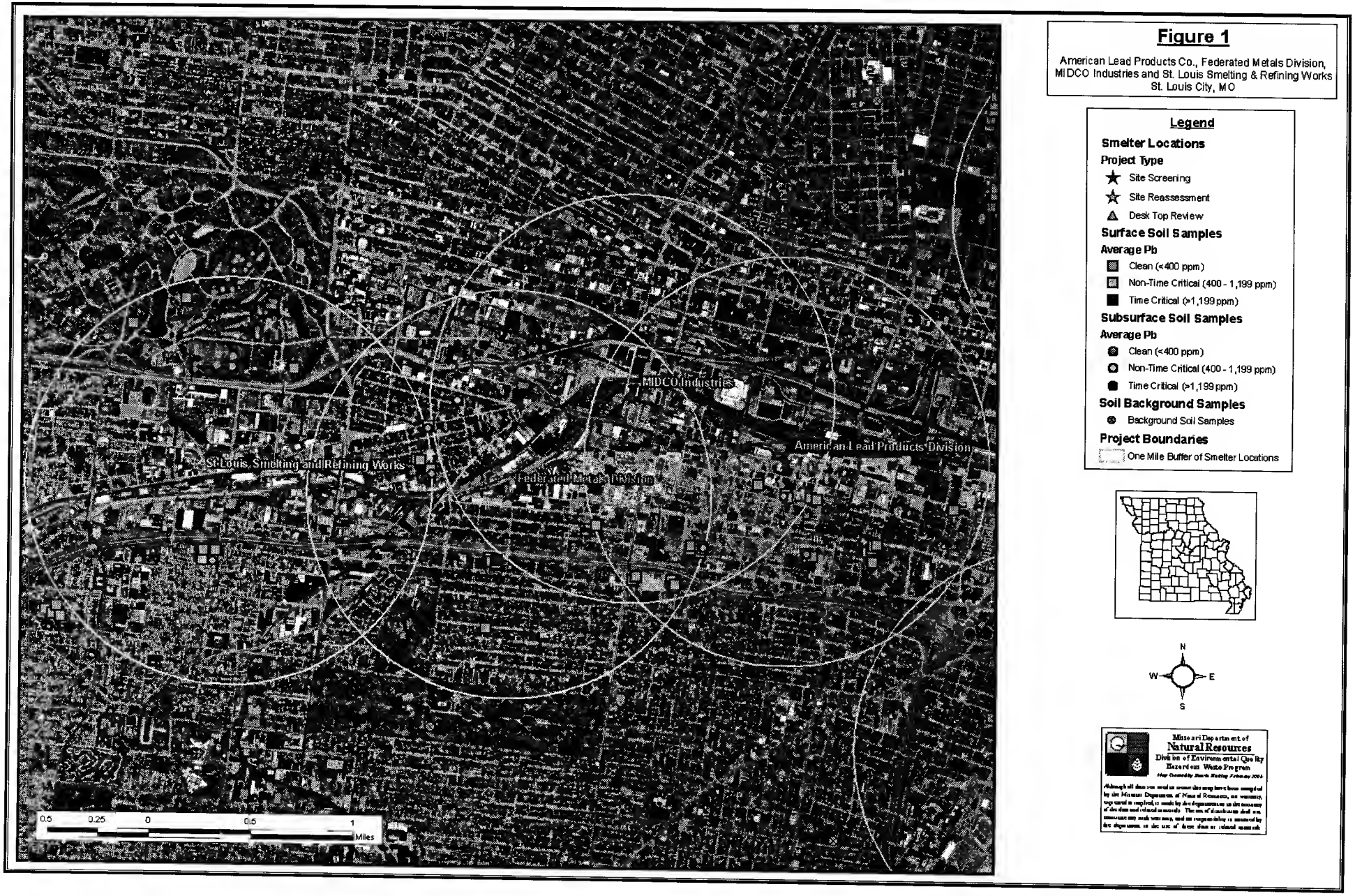

Figure 1

American Lead Products Co., Federated Metals Division, MIDCO Industries and St. Louis Smelting & Refining Works
St. Louis City, MO

Legend

Smelter Locations

Project Type

- Site Screening
- Site Reassessment
- Desk Top Review

Surface Soil Samples

Average Pb

- Clean (<400 ppm)
- Non-Time Critical (400 - 1,199 ppm)
- Time Critical (>1,199 ppm)

Subsurface Soil Samples

Average Pb

- Clean (<400 ppm)
- Non-Time Critical (400 - 1,199 ppm)
- Time Critical (>1,199 ppm)

Soil Background Samples

- Background Soil Samples

Project Boundaries

- One Mile Buffer of Smelter Locations

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TABLE 2. XRF RESULTS FOR SOIL SAMPLES COLLECTED JANUARY 26 AND 27, 2005 FEDERATED METALS DIVISION, ST. LOUIS, MISSOURI

- All values listed in parts per million (mg/kg)
- NL denotes benchmark value not listed in reference source
- Sample results in bold are significantly[1] above background concentrations
- Circled sample results exceed EPA PRG Residential Use Value[4]

Location	XRF Sample	Sample ID	Sample Type*	Pb Average
Reservoir Park	HWP050052	FEDM01P01SS01	SS	98.0
	HWP050053	FEDM01P02SS02	SS	117.6
	HWP050054	FEDM01P03SS03	SS	81.9
	HWP050057	FEDM01P04SS04	SS	155.1
	HWP050058	FEDM01P05SS05	SS	129.1
4136 Flad	HWP050059	FEDM02V01SS06	SS	184.5
4122 Detonty	HWP050060	FEDM03V01SS07	SS	109.0
4126 Detonty	HWP050061	FEDM04R01SS08	SS	**301.5**
	HWP050062	FEDM04R01SS09	SS	**1307.3**
4154 Detonty	HWP050063	FEDM05V01SS10	SS	207.1
	HWP050064	FEDM05V02SS11	SS	237.2
	HWP050065	FEDM05V03SS12	SS	**311.7**
4333 Hunt	HWP050069	FEDM06V01SB01	SB	**181.4**
	HWP050068	FEDM06V01SS13	SS	166.0
Adams Park	HWP050070	FEDM07P01SS14	SS	240.0
	HWP050071	FEDM07P02SS15	SS	253.6
4312-4 Manchester	HWP050075	FEDM08V01SB02	SB	95.6
	HWP050074	FEDM08V02SS16	SS	124.5
4311 Gibson	HWP050077	FEDM09R01SB03	SB	**568.3**
	HWP050076	FEDM09R01SS17	SS	**703.5**
		Average Background SS and SB		**88.2 and 41.0**
		SCDM[2]		NL
		CALM[3]		260
		EPA PRG[4]		400

[1] Above the PQL when background concentration is < PQL, or three times the background concentration when contaminant is detected in background sample.

[2] SCDM - Superfund Chemical Data Matrix, January 28, 2004, lower of reference dose and cancer risk benchmarks for soil pathway.

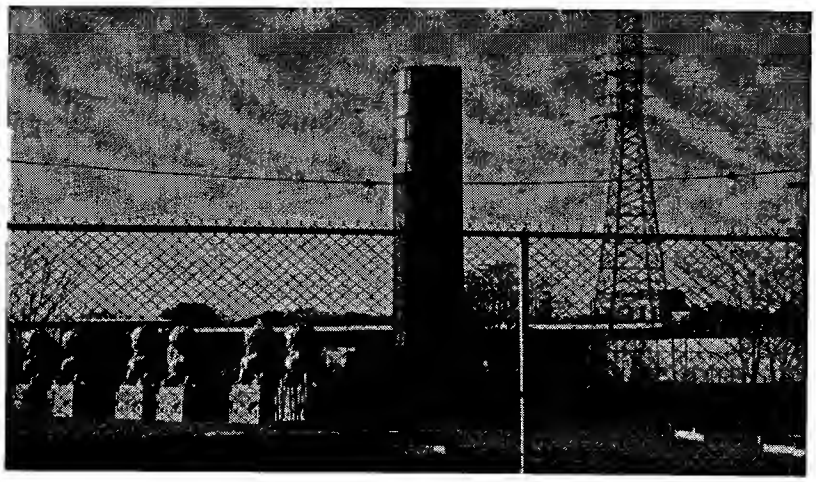
[3] CALM - Cleanup Levels for Missouri, September 2001, residential use.

[4] EPA PRG - EPA Region 9 Preliminary Remedial Goals, October 20(

* SB - subsurface soil sample collected from 3 -6 inches in depth.
SS - surface soil sample collected from 0-2 inches in depth.

Photograph 1
Federated Metals Division Site, St. Louis, Missouri. Photo taken on November 19, 2003 by Michael D. Giovanini, DEQ, HWP, Superfund

View of neighboring property located in Federated Metals Division site area. View looking northwest.



Photograph 2
Federated Metals Division Site, St. Louis, Missouri. Photo taken on November 19, 2003 by Michael D. Giovanini, DEQ, HWP, Superfund

View of a smoke stack on neighboring property located in Federated Metals Division site area. View looking west.

Photograph 3
Federated Metals Division Site, St. Louis, Missouri. Photo taken on January 26, 2005 by Rebecca Wells-Albers, DEQ, HWP, Superfund

Compton Hill Reservoir Park, view of sampling location 1. View facing north fromcorner of Grand Boulevard and Russell Boulevard.

Photograph 4
Federated Metals Division Site,
St. Louis, Missouri. Photo taken on January 26, 2005 by Rebecca Wells-Albers, DEQ, HWP, Superfund

Compton Hill Reservoir Park, view of sampling locations 1. View facing north from Compton Hill Place.

Photograph 5
Federated Metals Division Site,
St. Louis, Missouri. Photo taken on January 26, 2005 by Rebecca Wells-Albers, DEQ, HWP, Superfund

Compton Hill Reservoir Park, view of sampling location 1. View facing south towards Compton Hill Place.

Photograph 6
Federated Metals Division Site,
St. Louis, Missouri. Photo taken on January 26, 2005 by Rebecca Wells-Albers, DEQ, HWP, Superfund

Compton Hill Reservoir Park, view of sampling location 1. View facing east towards Grand Boulevard.

Photograph 7
Federated Metals Division Site
St. Louis, Missouri. Photo taken on January 26, 2005 by Rebecca Wells-Albers, DEQ, HWP, Superfund

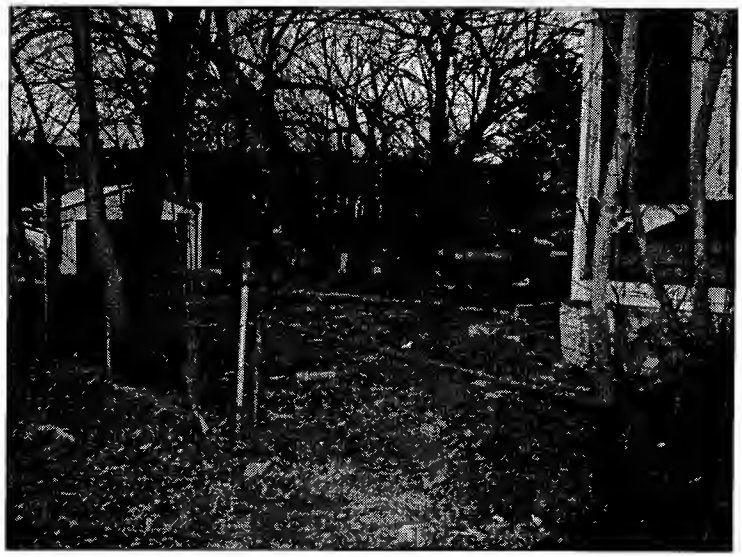
4136 Flad Avenue, view of sampling location 2. View facing south from Flad Avenue.

Photograph 8
Federated Metals Division Site,
St. Louis, Missouri. Photo taken on January 26, 2005 by Rebecca Wells-Albers, DEQ, HWP, Superfund

1422 DeTonty Street, view of sampling location 3. View facing south from DeTonty Avenue.

Photograph 9
Federated Metals Division Site,
St. Louis, Missouri. Photo taken on January 26, 2005 by Rebecca Wells-Albers, DEQ, HWP, Superfund

1426 DeTonty Street, view of sampling location 4. View facing south from DeTonty Avenue.



Photograph 10
Federated Metals Division Site,
St. Louis, Missouri. Photo taken on January 26, 2005 by Rebecca Wells-Albers, DEQ, HWP, Superfund

1426 DeTonty Street, view of sampling location 4. View facing southwest from southeast corner of 1426 DeTonty Steet residence.

Photograph 11
Federated Metals Division Site,
St. Louis, Missouri. Photo taken on January 26, 2005 by Rebecca Wells-Albers, DEQ, HWP, Superfund

4154-4156 DeTonty Street, view of sampling location 5. View facing southwest from DeTonty Street.

Photograph 12
Federated Metals Division Site,
St. Louis, Missouri. Photo taken on January 26, 2005 by Rebecca Wells-Albers, DEQ, HWP, Superfund

4154-4156 DeTonty Street, view of sampling location 5. View facing south from DeTonty Street.

Photograph 13
Federated Metals Division Site,
St. Louis, Missouri. Photo taken on January 27, 2005 by Rebecca Wells-Albers, DEQ, HWP, Superfund

4333 Hunt Avenue, view of sampling location 6. View is facing north from Hunt Avenue.

Photograph 14
Federated Metals Division Site,
St. Louis, Missouri. Photo taken on January 27, 2005 by Rebecca Wells-Albers, DEQ, HWP, Superfund

Adams Park, view of sampling location 7. View is facing southeast from corner of Newstead Avenue and Norfolk Avenue.

Photograph 15
Federated Metals Division Site,
St. Louis, Missouri. Photo taken on January 27, 2005 by Rebecca Wells-Albers, DEQ, HWP, Superfund

Adams Park, view of sampling location 7. View is facing northwest from Vista Avenue.

Photograph 16
Federated Metals Division Site,
St. Louis, Missouri. Photo taken on January 27, 2005 by Rebecca Wells-Albers, DEQ, HWP, Superfund

4312 ManchesterAvenue, view of sampling location 8. View is facing southeast from Manchester Avenue.

Photograph 17
Federated Metals Division Site,
St. Louis, Missouri. Photo taken on January 27, 2005 by Rebecca Wells-Albers, DEQ, HWP, Superfund

4311 Gibson Avenue, view of sampling location 9. View is facing southeast from alley north of Gibson Avenue.

Photograph 18
Federated Metals Division Site,
St. Louis, Missouri. Photo taken on January 27, 2005 by Rebecca Wells-Albers, DEQ, HWP, Superfund

4311 Gibson Avenue, view of sampling location 9. View is facing southeast from alley north of Gibson Avenue.